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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,486	09/25/2003	John R. Moffatt	200308817-1	8250
22879 7590 10/14/2009 HEWLETT-PACKARD COMPANY Intellectual Property Administration 3404 E. Harmony Road Mail Stop 35 FORT COLLINS, CO 80528			EXAMINER SHEWAREGED, BETTELHEIM	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 10/14/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/672,486

Applicant(s)

MOFFATT ET AL.

Examiner

Betelhem Shewareged

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3, 4, 8-10, 12-14, 16, 17, 21-24, 26, 28-30, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) 8-10, 12-14, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 21-24, 26, 28-30, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's response along with the Declaration Under 37 C.F.R. 1.132 filed on 06/03/2009 has been fully considered. Claims 3, 4, 8-10, 12-14, 16, 17, 21-24, 28-30 and 33 are amended, claims 1, 2, 5-7, 11, 15, 18-20, 25, 27 and 31 are canceled, claims 3, 4, 8-10, 12-14, 16, 17, 21-24, 26, 28-30, 32 and 33 are pending. Currently, claims 8-10, 12-14, 16 and 17 are withdrawn from consideration as non-elected invention.

Claim Objections

2. Claims 26 and 32 are objected to because of the following informalities:
- A. Claim 26 does not further limit its independent claim 21 because the limitation of claim 26 is already recited in claim 21.
- B. Claim 32 does not further limit its independent claim 28 because the limitation of claim 32 is already recited in claim 28.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 3, 21, 22, 24, 26 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Schleicher et al. (US 5,837,036).
5. Schleicher teaches a composition comprising poly(phenylene sulfide) coated on a support, wherein the poly(phenylene sulfide) has a molecular weight of 4,000-200,000, and a melting point of above 250 degree C. The poly(phenylene sulfide) comprises poly(1,4-phenylene sulfide) and/or poly(1,3-phenylene sulfide). (See col. 3, line 8 thru col. 3, line 49 and col. 4, line 34).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 21-24, 26, 28-30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida et al. (US 2002/0071941 A1) in view of Schleicher et al. (US 5,837,036).
8. Tsuchida teaches an ink jet recording medium comprising a homopolymer or copolymer compound containing sulfur (abstract) to ensure a high density of printed images, to provide images having high quality, to show only a slight color change and discoloration of printed images even when exposed to ozone gas and is excellent in the long-term shelf life (abstract). Tsuchida further teaches the compound containing sulfur is coated on a substrate such as paper and plastic film [0031]. Tsuchida does not teach

the sulfur containing compound is poly(1,4-phenylene sulfide) or poly(1,3-phenylene sulfide). However, Schleicher teaches a composition that can be coated on a support, wherein the composition comprises poly(phenylene sulfide) having a molecular weight of 4,000-200,000, and a melting point of above 250 degree C. The poly(phenylene sulfide) comprises poly(1,4-phenylene sulfide) and/or poly(1,3-phenylene sulfide). (See col. 3, line 8 thru col. 3, line 49 and col. 4, line 34). Tsuchida and Schleicher are analogous art because they are from a similar problem solving area in relation to ozone gas resistance. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the poly(1,4-phenylene sulfide) and/or poly(1,4-phenylene sulfide) of Schleicher with the invention of Tsuchida, and the motivation would be, as Schleicher suggests, to reduce the ozone content in the recording sheet by reacting the ozone with the poly(1,4-phenylene sulfide) and/or poly(1,3-phenylene sulfide) (col. 1, line 65).

9. With respect to the amount of the poly(1,4-phenylene sulfide) or poly(1,3-phenylene sulfide), the experimental modification of this prior art in order to, ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of the poly(1,4-phenylene sulfide) or poly(1,4-phenylene sulfide), and the motivation would be to ensure a high density of printed images, to provide images having high quality, to show only a slight color change and discoloration of printed images even when exposed to ozone gas. A prima facie case of obviousness may be rebutted, however, where the results of the

optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

10. Claims 4, 21-24, 26, 28-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schleicher et al. (US 5,837,036).

11. Schleicher teaches a composition comprising poly(phenylene sulfide) coated on a support, wherein the poly(phenylene sulfide) has a molecular weight of 4,000-200,000, and a melting point of above 250 degree C. The poly(phenylene sulfide) comprises poly(1,4-phenylene sulfide) and/or poly(1,3-phenylene sulfide). (See col. 3, line 8 thru col. 3, line 49 and col. 4, line 34).

12. With respect to the amount of the poly(1,4-phenylene sulfide) or poly(1,3-phenylene sulfide), the experimental modification of this prior art in order to, ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of the poly(1,4-phenylene sulfide) or poly(1,4-phenylene sulfide), and the motivation would be to reduce or control ozone degradation of the coated support. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Response to Arguments

13. Applicant's argument is based on that the reference of Schleicher does not teach a discrete layer containing the poly(phenylene sulfide) (PPS hereinafter) because Schleicher teaches applying a solution of PPS to achieve a coating whereas in the current invention the inhibitor layer is formed in other than a solution form, i.e., hot-melt application. **This argument is not persuasive for the following reason(s).**

Schleicher teaches applying the PPS as **a coating or impregnation**. In the prior Office Action, the rejections **do not depend** on the embodiment related to **impregnation**. The rejections **depend** on the embodiment related to **coating**. Generally, a "coat" is created by coating a composition onto a substrate; and by definition a "coat" is a **layer** of one substance covering another (**see** the definition of "coat" from the Merriam-Webster Online Dictionary). Schleicher teaches coating a solution of PPS onto a support. According to the definition above, after coating it is well established that a PPS coat is formed, and the formed PPS coat meets the claimed discrete topmost inhibitor layer. Schleicher does not expressly teach that PPS coat cannot be formed after coating a solution of PPS. With respect to Applicant's argument regarding penetration of the coating in the support, (1) the reference of Schleicher does not expressly disclose that all the coating solution penetrates into the substrate without forming a PPS coat; and (2) in the current invention, it is expressly recited that the inhibitor may penetrate into the print medium.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
15. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is (571)272-1529. The examiner can normally be reached on Monday-Friday 7am-4:30pm.
17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on 571-272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
October 08, 2009

/Betelhem Shewareged/
Primary Examiner, Art Unit 1794